Patent Claims

1. A method for data transmission via a radio interface between a base station (BS) and a subscriber station (MS) in a radio communications system, in which
- data (d1, d2, d3) for a number of services (S1, S2, S3) can be transmitted simultaneously between the base station (BS) and the subscriber station (MS),
- a service-specific block size (B) is used as the smallest transmission unit,
- the number (K) of blocks for the services (S1,S2,S3) is signaled for each frame (fr),
- the arrangement of the blocks for the services (S1, S2, S3) in the frame (fr) is obtained from the number of services (S) and the number (K) of blocks per service (S1, S2, S3) on the basis of predetermined coding,
- the data (d1, d2, d3) are entered in the frame (fr) in accordance with the predetermined coding,
- a frame (fr) having blocks for a number of services (S1, S2, S3) is transmitted via the radio interface, and
- at the receiving end, the data (d1, d2, d3) are read from the frame (fr) in accordance with the signaled number (K) of blocks per service (S1, S2, S3) and the predetermined coding.

2. The method as claimed in claim 1, in which the predetermined coding indicates the sequence of the blocks.

3. The method as claimed in one of the preceding claims, in which the predetermined coding indicates the number of transmission channels which are used simultaneously

between the base station (BS) and the subscriber station (MS).

4. The method as claimed in one of the preceding claims, in which the data (d1, d2, d3) are transmitted via broadband transmission channels, and the predetermined coding
indicates the spread factors (SF) used in the transmission channels.

5. The method as claimed in one of the preceding claims, in which
the number (K) of blocks per service (S1, S2, S3) in each frame (fr) is signaled as an absolute statement.

6. The method as claimed in one of claims 1 to 4, in which
the number (K) of blocks per service (S1, S2, S3) in each frame (fr) is signaled relative to the statements for the preceding frame (fr).

7. The method as claimed in one of claims 5 or 6, in which
the number (K) of blocks per service (S1, S2, S3) is varied from frame (fr) to frame (fr) in steps of different size.

8. The method as claimed in one of the preceding claims, in which
the predetermined coding is defined on a system-wide basis.

9. The method as claimed in one of the preceding claims, ~~in~~ which

the predetermined coding is defined when setting up a connection between the base station (BS) and the subscriber station (MS).

10. The method as claimed in one of the preceding claims, in which
the predetermined coding minimizes the number of transmission channels per connection between the base station (BS) and the subscriber station (MS).

11. The method as claimed in one of the preceding claims, in which
the block size (B) is one bit.

12. A radio communications system
having at least one base station (BS) and one subscriber station (MS) which are connected via a radio interface for simultaneous data transmission of data (d1, d2, d3) for a number of services (S1, S2, S3), with a service-specific block size (B) being used as the smallest transmission unit,
having signaling means (SA) which signal the number (K) of blocks for the services (S1, S2, S3) for each frame (fr) to be transmitted,
having coding means (KM) which enter the data (d1, d2, d3) in the frame (fr) in accordance with a predetermined coding, the number of services (S1, S2, S3) and the number (K) of blocks per service (d1, d2, d3),
having transmission means (TX) which transmit a frame (fr) having blocks for a number of services (S1, S2, S3) via the radio interface, and
having decoding means (DKM) which, at the receiving end, read the data (d1, d2, d3) from the frame (fr) in accordance with the predetermined coding and the signaled number (K) of blocks per service (S1, S2, S3).